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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/645,986

08/22/2003

Naoki Matsushima

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7590

09/01/2004

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EXAMINER

HASAN, MOHAMMED A

ART UNIT

PAPER NUMBER

2873

DATE MAILED: 09/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/645,986

Applicant(s)

MATSUSHIMA ET AL.

Examiner

Mohammed Hasan

Art Unit

2873

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 6 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 - 6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8/22/2003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Priority

1. Receipt of acknowledged of papers submitted under 35 U.S.C. 119 (a) – (d), which papers have placed of record in the file.

Oath/Declaration

2. Oath and declaration filed on 1/23/2004 is accepted.

Information Disclosure Statement

3. The prior art documents submitted by applicant in the Information Disclosure Statement filed on 8/22/2003 have all been considered and made of record (note the attached copy of form PTO – 1449).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 – 6 are rejected under 35 U.S.C. 102 (e) as being anticipated by Yamashita et al (6,507,446 B2).

Regarding claim 1, Yamashita et al discloses (refer to figure 1) an optical module comprising: a substrate (1) provided with a groove (2) that is formed in a surface thereof, the groove having a first slope crossing the surface of the substrate at an obtuse angle (i.e., more than angle more than 90°) and a second slope facing to the first slope and crossing the surface of the substrate at an obtuse angle, an optical element mounted on the substrate at an obtuse angle, an optical element (100) mounted on the substrate, and an optical part put in the groove, wherein an adhesive is applied to a portion of at least the second slope except the first slope of the groove so as to fix the optical part in the groove in a structure in which the optical part is in contact with or in the proximity of the first slope and the second slope (column 5, lines 15 – 59, column 10, lines 6 – 13, column 12, lines 6 – 22).

Regarding claim 2, Yamashita et al discloses, the adhesive is an ultraviolet ray curable type epoxy resin (column 10, lines 6 – 13).

Regarding claim 3, Yamashita et al discloses (refer to figure 1) an optical module comprising : a silicon substrate (1) provided with a V-shaped or trapezoidal groove (2 or 3) that is formed in the surface of the silicon substrate by anisotropic etching , the groove having a first slope and a second slope facing to the first slope and

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crossing the surface of the substrate at an obtuse angle, an optical element (100) mounted on the silicon substrate (1) and an optical part put in the groove, wherein an adhesive is applied to a portion of at least the second slope except the first slope of the groove so as to fix the optical part in the groove in a structure in which the optical part is in contact with or in the proximity of the first slope and the second slope (column 5, lines 15 – 59, column 10, lines 6 – 13, column 1, lines 56 – 65).

Regarding claim 4, Yamashita et al discloses, the adhesive is an ultraviolet ray curable type epoxy resin (column 10, lines 6 – 13).

Regarding claim 5, Yamashita et al discloses (refer to figure 1) a method for manufacturing an optical module comprising: a groove (2) forming step of forming a groove in a surface of a substrate, the groove having a first slope crossing a surface of the substrate (1) at an obtuse angle and a second slope facing to the first slope and crossing the surface of the substrate at an obtuse angle, a optical element (100) mounting step of mounting an optical element on the substrate at an obtuse angle, a optical element mounting step of mounting an optical element on the substrate having the grove formed in the groove forming step, an optical part putting step of applying an adhesive to a portion of at least the second slope of the groove formed in the groove forming step and putting the optical part in the groove in such a manner as to be in contact with or in the proximity of the first slope and the second slope, an adhesive applied in the optical part putting step (column 5, lines 15 – 59, column 10, lines 6 – 13, column 12, lines 6 – 22).

Regarding claim 6, Yamashita et al discloses (refer to figure 1) a method for manufacturing an optical module, a groove forming step of forming a V-shaped or trapezoidal groove (2 or 3) in a surface of a silicon substrate (1) by anisotropic etching, the groove having a first slope and a second slope facing to the first slope, an optical element mounting step of mounting an optical element on the surface, of the silicon substrate, having the groove formed in the groove forming step, an optical part mounting step of applying an adhesive to a portion of at least the second slope except the first slope of the groove formed in the groove forming step and putting the optical part in the groove in such a manner as to be in contact with or in the proximity of the first slope and the second slope and an adhesive curing step of curing the adhesive applied in the optical part putting step (column 5, lines 15 – 59, column 10, lines 6 – 13, column 1, lines 56 – 65).

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The closest prior art

Bourcier et al (6,512,642 B1) discloses a method and structure for aligning optical element.


Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammed Hasan whose telephone number is (571) 272-2331. The examiner can normally be reached on M-TH, 7:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on (571) 272- 2328. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MH
August 19,2004


Scott U. Sugarman
Primary Examiner